

Jasminum domatiigerum subsp. *australis* (Oleaceae), a new subspecies from north Queensland

Wayne K. Harris & William J. McDonald

Summary

Harris, Wayne K. & McDonald, William J (2000). *Jasminum domatiigerum* subsp. *australis* (Oleaceae), a new subspecies from north Queensland. *Austrobaileya* 5(4):699–703. *Jasminum domatiigerum* subsp. *australis* from north Queensland is described as new and is illustrated and compared with other related species from Australia. Previous records of this species are from New Guinea where it occurs in similar habitats. This is the first reported occurrence from Australia. Notes are provided on its distribution, habitat and conservation status. A key to the Australian and New Guinea trifoliolate species of *Jasminum* is provided.

Key words: Oleaceae, *Jasminum domatiigerum*, *Jasminum domatiigerum* subsp. *australis*, Queensland, New Guinea, systematics, ecology, distribution.

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Introduction

The genus *Jasminum* L. in Australia consists of ten species and a number of subspecies and was most recently revised by Green (1984). The genus is widely distributed throughout eastern and northern Australia and two species extend further westwards. *J. calcareum* F. Muell. extends from central Australia through to Western Australia. *J. didymum* subsp. *lineare* (R.Br.) P.S. Green is the most widespread extending west from the Great Divide in eastern Australia through central Australia and into the northern parts of Western Australia south of the Kimberley. *Jasminum* Section *Trifoliolata* DC. is represented by two species and three subspecies. Lingelsh. (1927) described nine species from Papua New Guinea of which two belong to section *Trifoliolata* and one of these is recorded from Australia. *Jasminum domatiigerum* Lingelsh. has a limited distribution in northern Queensland where it occurs as a scrambling climber in the wetter regions in complex notophyll and mesophyll vine forests.

Jasminum domatiigerum Lingelsh. subsp. ***australis*** W.K. Harris & W.J. McDonald **subsp. nov.** Subspecies *Jasminii domatiigeri* a typo foliolis petiolulisque majoribus, pedicellis longioribus et

floribus majoribus (8–15 mm long.) differens; ad North Queensland restricta est. **Typus:** Queensland. COOK DISTRICT: Forrester Road Malanda, 17° 21' S 145° 34' E; 20 Jul. 1998, R. Jensen 008888: (holo: BRI).

Description: Evergreen scrambling or twining shrub to about 4 m; stem pubescent to tomentose with orange-brown simple hairs. **Leaves** opposite, trifoliolate; petioles 8–20 mm long channelled on the upper surface, pubescent; lamina coriaceous, ovate to broadly ovate, glabrous to sparsely pubescent on the adaxial surface, glossy, sparsely pubescent on the abaxial surface, slightly discolorous, terminal leaflet (5.5–)6.6–8.0(–8.5) cm long by (3.6–)4.0–5.0(–5.5) cm broad, petiolule (1.3–)1.4–1.9(–2.2) cm long, lateral leaflets (2.6–)3.4–4.0(–4.5) cm long and (1.7–)1.8–2.6(–3.6) cm broad, petiolules (2–)3.0–5.0(–6.0) cm long; margins entire not thickened, slightly recurved; apex acute to acuminate; base cordate; venation simple, pinnate, on upper surface depressed, on lower surface prominently raised with 3 or 4 secondary veins each side of the midrib. **Inflorescences** to 90 mm long, on axillary side shoots, sub-umbellate, (1–) 3 (–7)-flowered, flowers perfumed, bracts linear subulate, puberulent 3–6 mm long; pedicels 2–9 mm long, pubescent. Calyx pubescent, tube 2–7 mm long

and 2–2.5 mm in diameter, with 4–5 linear to triangular teeth, 0.8–2.0 mm long. **Corolla** hypocrateriform, white to cream on the outside, white to cream internally, tube 8–15 mm long with 4–6 lanceolate or narrow lanceolate acute lobes, 5–7 mm long. **Stamens** 2; anthers 3.5–4 mm long, on filaments 1.5–2 mm long, attached about midway along the corolla tube, not exerted. **Ovary** 0.8–1.0 mm long; style about 10 mm long, not exerted, heterostyly not observed; stigma slightly bilobed about 1.5 mm long. **Fruit** spherical to slightly ovoid, often paired (or single by abortion), 8–10 mm long by 6–8 mm broad, purple-black. Fig 1, 2.

Phenology: Flowering occurs from May through to July, fruits appearing September to November. Flowers are sweetly fragrant.

Specimens Examined: **Queensland.** COOK DISTRICT: Daintree R headwaters, Black Mountain area, Daintree NP, [16°23'S 145°12'E], May 1998, *P.I. Forster + PIF 22968*, (BRI); Herberton Range, SF 194, Mt Baldy, [17°18'S 145°24'E], Oct 1997, *P.I. Forster PIF 21854* (BRI). NORTH KENNEDY DISTRICT: Arthur Bailey Road S of Ravenshoe, [17°40'S 143°31'E], Jun 1995, *P.I. Forster PIF 16749*, (BRI, QRS, MEL, K); Mt Fox, [18°49'S 145°51'E], Oct 1949, *F. Mull, s.n.* [AQ 073283] (BRI); SOUTH KENNEDY DISTRICT: Broken River Track, Eungella NP, Nov 1998, *W.J. McDonald + 4484* (BRI); Rd along Clarke Range, SF 679 Teemburra c. 8 km S of Crediton township, Jun 1994, *W.J. McDonald + 5970* (BRI); Diggings Road Eungella NP, 20°5'-S 148°3'-E, without date, *S. Pearson SP465* (BRI); Broken River, Eungella NP, 21°1'-S 148°3'-E, May 1985, *M.D. Pearson s.n.* [AQ 398226] (BRI).

Distribution and habitat: *J. domatiigerum* subsp. *australis* has been recorded from the northern regions of Queensland from the Daintree River to the Eungella National Park in the south (Map 1). The species is associated with complex mesophyll and notophyll vine forests where it is a slender scrambling climber. Soil types are red and usually derived from granite.

Diagnostic Features: *J. domatiigerum* subspecies *australis* is readily distinguished from the type of the species by its larger flowers (corolla tub 9–12 mm long), longer pedicels (up to 9 mm long), larger leaflets (up to 8 mm long) and longer petiolules (lateral petiolule up to 5 mm long).

Affinities: *J. domatiigerum* has close affinities with *J. didymum* and *J. dallachii*. It differs from the former in having densely pubescent to tomentose branches, petioles and calyces and hairy domatia. *J. dallachii* has smaller leaflets, fewer flowers on a shorter inflorescence and domatia which are formed at the vein intersections by a flap of tissue between the primary and the secondary veins.

Conservation Status: By IUCN (1994) criteria the taxon is Data Deficient (DD).

Etymology: Latin meaning 'of the south' in reference to its occurrence in Australia.

Key to *Jasminum* sect. *Trifoliolata* species in Australia and New Guinea

1. Stems, petioles and leaves pubescent-tomentose 2
Stems, petioles and leaves glabrous or minutely puberulent 5
2. Terminal leaflets mostly less than 6cm long, inflorescences
short, less than 3 cm long mostly 1–5- flowered **J. dallachii**
Terminal leaflets greater than 6 cm long, inflorescence greater
than 3 cm long, mostly 5–7- flowered 3
3. Leaves without domatia **J. gilgianum**
Leaves with domatia 4
4. Corolla tube 6–8 mm long **J. domatiigerum** subsp. **domatiigerum**
Corolla tube 9–12 mm long **J. domatiigerum** subsp. **australis**

- 5. Terminal leaflet lanceolate to ovate 6
Terminal leaflet linear to narrow lanceolate **J. didymum** subsp. **lineare**
- 6. Terminal leaflet more than 4 cm long **J. didymum** subsp. **didymum**
Terminal leaflet less than 4cm long **J. didymum** subsp. **racemosum**

Acknowledgements

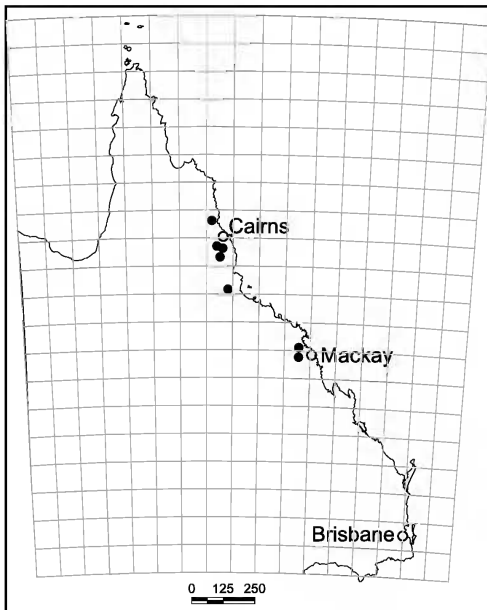
We thank Dr. G.P. Guymer for provision of facilities at BRI. Peter Bostock provided the Latin diagnosis.

References

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Map 1. Distribution of *J. domatiigerum* subsp. *australis* in North Queensland

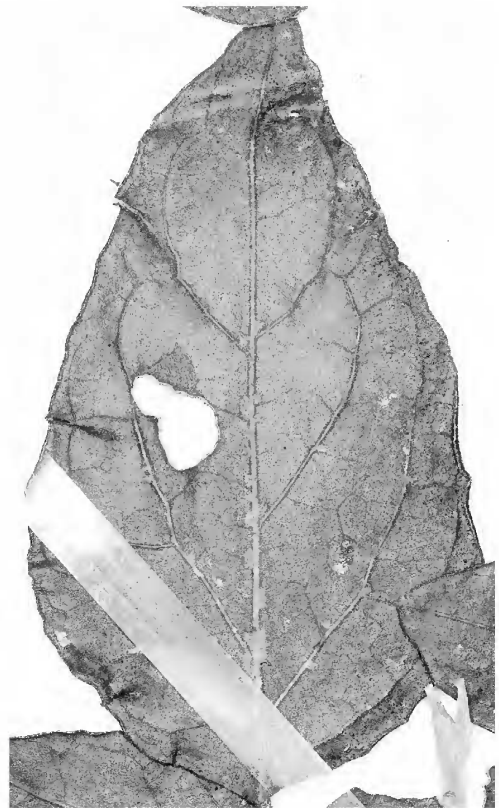


Fig 1. Adaxial leaf surface showing prominent domatia along major veins and at vein intersections. Leaf is c. 3.5 cm broad. P.I. Forster PIF 16749 (BRI)

AUSTRALIAN NATIONAL HERBARIUM
ATHERTON (QRS) CSIRO Division of Plant Industry

QUEENSLAND HERBARIUM (BRI)
Brisbane Australia

AQ 537154

Jasminum dallachii

COLLECTOR & NUMBER

Jensen, R. 00888

COLLECTION DATE

20 Jul 1998

LOCALITY

Forrester road, Malanda

17° 21' S 145° 34' E 760 m

HABITAT

Rain Forest

NOTES

Twining vine.
Flowers fragrant.
Calyx green.
Corolla white.

Flowers in alcohol.

FAMILY

OLEACEAE Spirit # 13698

Queensland Herbarium (BRI)
Jasminum sp. C. Crockett W.J. McDonald +
S970
Det. P. Jensen Date 25 Feb 1999

Jasminum domatiigerum
ssp. *australis*
det. *N. Harris* Herb. BRI
Holotype



Accepted Name
Jasminum domatiigerum ssp.
australis W.K. Harris & W.J. McDonald
V. Date
Herb. BRI

Fig 2. *Jasminum domatiigerum* subsp. *australis* W.K. Harris & W.J. McDonald. Photograph of holotype at BRI. (Approx. half natural size.)

45402

PLANTAE PAPUANAE

Botanical Collections of the Department of Forests
Papua and New Guinea

J.S. Womersley N.G.F. 9449 April 1957

Jasminum

HERBARIUM OF THE UNIVERSITY OF
NEW ENGLAND (NE)

Jasminum domatiigerum Lingelsh.
det. R. Kiew 9.8.81

Mt. Kum, near Mt. Hagen Western Highlands, T.N.G.

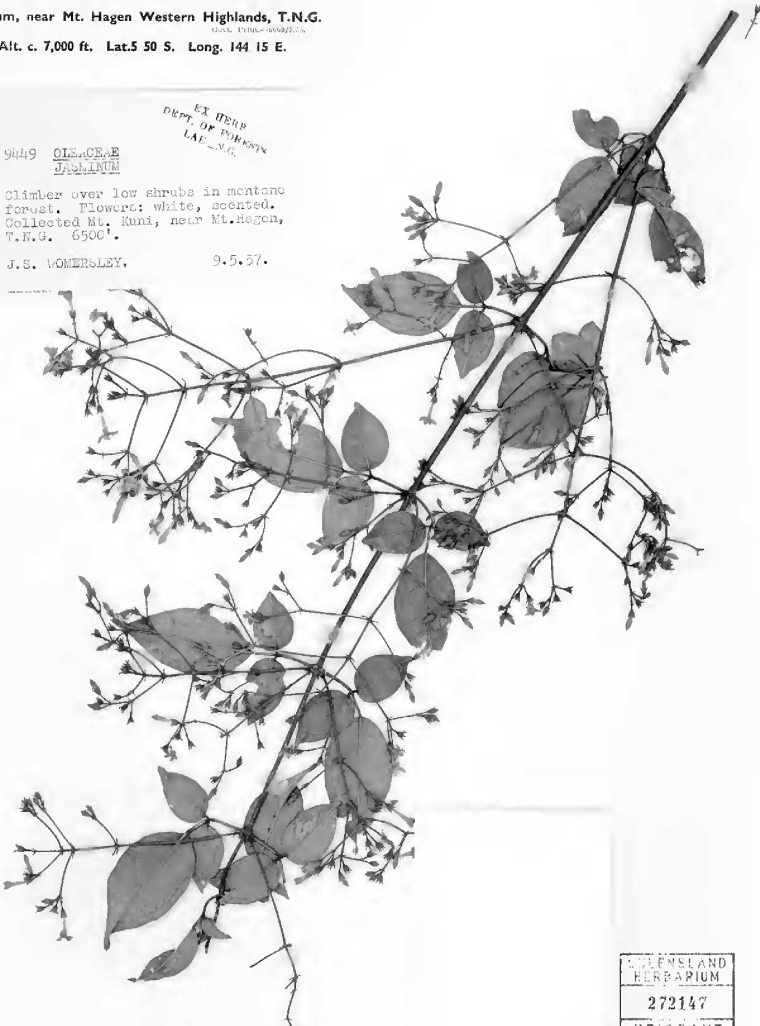
Alt. c. 7,000 ft. Lat. 50 S. Long. 144 15 E.

9449 OLEACEAE
JASMINUM

Climber over low shrubs in montane forest. Flowers: white, scented. Collected Mt. Kum, near Mt. Hagen, T.N.G. 6500'.

J.S. WOMERSLEY. 9.5.57.

EX HERB
DEPT. OF FORESTS
LAE, N.G.



BRI LOAN

NEW ENGLAND
HERBARIUM
272147
BRISBANE

Fig 3. *Jasminum domatiigerum* subsp. *domatiigerum* Lingelsh. J.S. Womersley N.G.F. 9449, Mt Kum, PNG (BRI). (Approx. half natural size)